

**Note to Readers:** *EHP* strives to ensure that all journal content is accessible to all readers. However, some figures and Supplemental Material published in *EHP* articles may not conform to 508 standards due to the complexity of the information being presented. If you need assistance accessing journal content, please contact [ehp508@niehs.nih.gov](mailto:ehp508@niehs.nih.gov). Our staff will work with you to assess and meet your accessibility needs within 3 working days.

## **Supplemental Material**

# **Forest Fire Smoke Exposures and Out-of-Hospital Cardiac Arrests in Melbourne, Australia: A Case-Crossover Study**

Martine Dennekamp, Lahn D. Straney, Bircan Erbas, Michael J. Abramson, Melita Keywood, Karen Smith, Malcolm R. Sim, Deborah C. Glass, Anthony Del Monaco, Anjali Haikerwal, and Andrew M. Tonkin

## **Table of Contents**

### 1. Criteria for the identification of fire-hours

**Figure S1.** Time series of hourly concentrations of PM<sub>2.5</sub> and CO. Filled in circles represent fire periods, lines represent concentration of PM<sub>2.5</sub> in the top figure and CO in the bottom figure.

**Figure S2.** Hourly PM<sub>2.5</sub> and CO concentrations as a function of wind direction. Diameter of the circle represents concentration (also represented by the vertical axis with the scale and units i.e. for the left diagram, the diameter of the circle represents PM<sub>2.5</sub> concentration of 30  $\mu\text{g m}^{-3}$  from the centre of the circle to the circumference of the circle; for the right hand diagram the diameter of the circle represents CO concentration of 450 ppb from the centre of the circle to the circumference of the circle. North is represented by 0 on the circumference of the circle east by 90, south by 180 and west by 270.

**Table S1.** Selection criteria for smoke impacted periods.

### 2. Methodology - calculation of excess out-of-hospital cardiac arrests

*1. Model-derived calculation*

*2. Direction calculation*

**Table S2.** Estimated percentage difference in the relative odds of out-of-hospital cardiac arrest for an interquartile range increase in individual pollutants based on conditional logistic regression models adjusted for temperature and relative humidity. Single Pollutant models by age, sex and non-fire vs fire period.

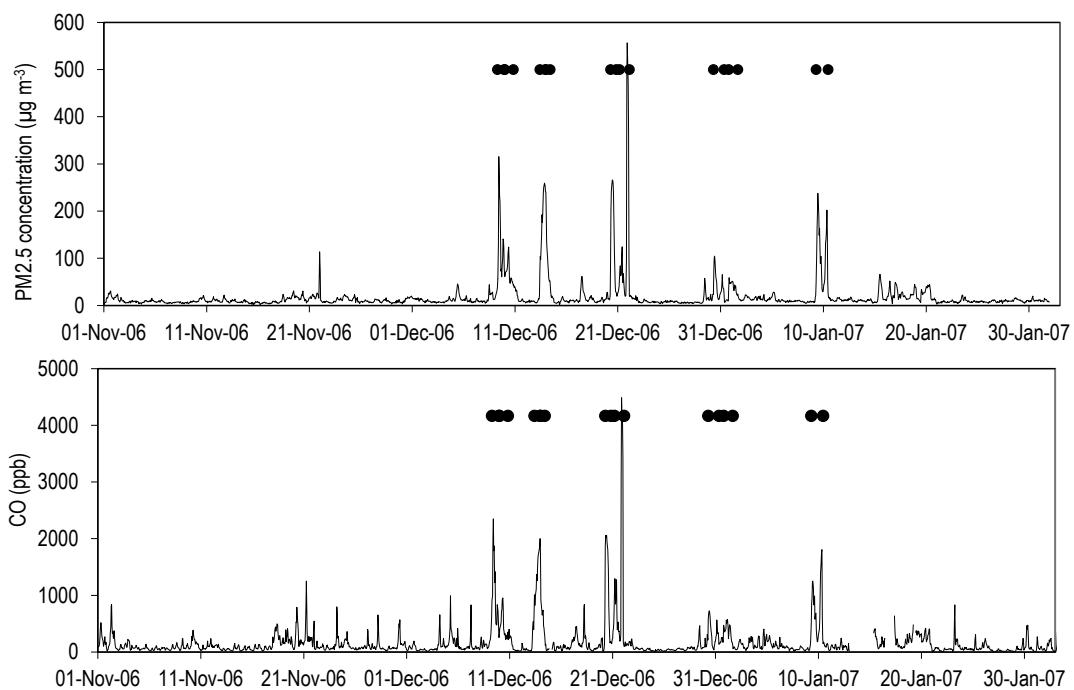
## 1. Criteria for the identification of fire-hours

**(By Melita Keywood - CSIRO Marine and Atmospheric Research, Aspendale, Victoria, Australia)**

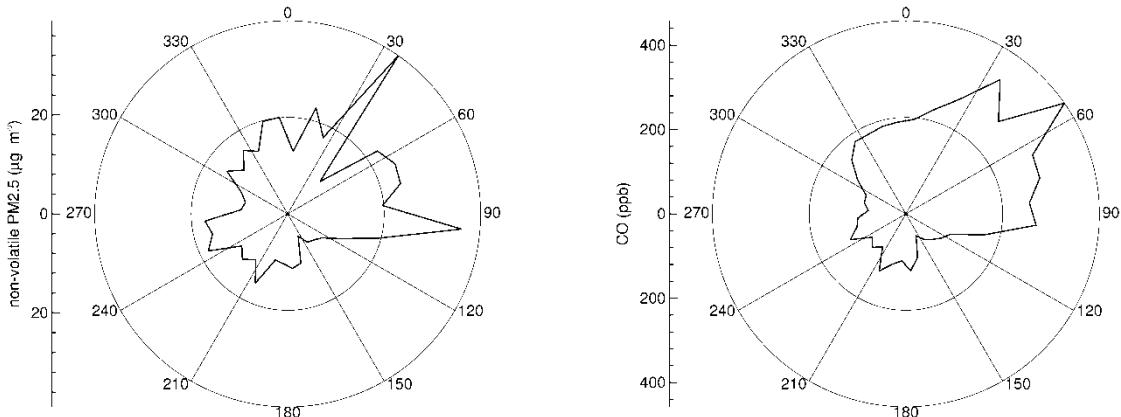
Bushfire smoke impacted periods were identified by a combination of increases in particle and gas concentrations and wind directions. Figure S1 shows the time series of hourly concentrations of PM<sub>2.5</sub> and CO for the period 1 November 2006 to 28 February 2007. The time series are marked by significantly high concentrations in most of the PM<sub>2.5</sub> and CO between mid December and early January. Figure S2 also reveals that in general high concentrations of a PM<sub>2.5</sub> and CO is associated with wind directions from the east and north east as is the concentration of CO.

The above observations were used to derive criteria with which to select periods impacted by bushfire smoke so that the contribution of bushfire smoke to air quality at the Aspendale site could be compared with air quality under non-bushfire effected summer conditions. The criteria used to select the bushfire impacted periods are listed in Table S1.

PM<sub>2.5</sub> was measured every 5 minutes using a Tapered Element Oscillating Microbalance Filter Dynamic Measurement System (TEOM 8500 FDMS Rupprecht & Patashnik, Albany NY). CO was measured by infra red photometric detection gas filter correlation spectroscopy (Ecotech EC9830T CO trace analyser, Knoxfield, Australia).



**Figure S1.** Time series of hourly concentrations of PM<sub>2.5</sub> and CO. Filled in circles represent fire periods, lines represent concentration of PM<sub>2.5</sub> in the top figure and CO in the bottom figure.



**Figure S2.** Hourly PM<sub>2.5</sub> and CO concentrations as a function of wind direction. Diameter of the circle represents concentration (also represented by the vertical axis with the scale and units i.e. for the left diagram, the diameter of the circle represents PM<sub>2.5</sub> concentration of 30  $\mu\text{g m}^{-3}$  from the centre of the circle to the circumference of the circle; for the right hand diagram the diameter of the circle represents CO concentration of 450 ppb from the centre of the circle to the circumference of the circle. North is represented by 0 on the circumference of the circle east by 90, south by 180 and west by 270.

**Table S1.** Selection criteria for smoke impacted periods.

| Criteria (hourly data)                                 |
|--|
| PM <sub>2.5</sub> concentration > 50 $\mu\text{g/m}^3$ |
| CO concentration > 50 ppb                              |
| Wind direction 1000 m trajectory origin 315-45°        |

## **2. Methodology - calculation of excess out-of-hospital cardiac arrests**

We describe two approaches for estimating the number of arrests attributable to the forest fires. First, a model derived estimate, using the odds ratio for an interquartile range increase of PM<sub>2.5</sub> levels in the 48 hours preceding the arrest, and second a direct calculation based on the difference in the rates between the ‘fire-hours and non-‘fire-hours’.

### ***1. Model-derived calculation***

We estimated the excess number of arrests associated with increases in the 48 hour average of PM<sub>2.5</sub> during the Risk periods. We can estimate the excess risk as follows, where  $P$  represents the mean 48 hour average of PM<sub>2.5</sub> and the subscripts 1 and 2 are used to represent the Risk and Non-Risk periods respectively. Thus the number of interquartile range increases in the mean value can be calculated as  $(P_1-P_2)/IQR$ .

Recall that the odds ratio approximates the relative risk where the effect size is small and the initial risk low. Using the odds ratio, OR, for the 48 hour average of PM<sub>2.5</sub> and letting  $a$  represent the number of arrests, we estimate the excess risk ER as  $ER = [(P_1-P_2)/IQR](OR-1)$ .

To propagate the uncertainty of the model coefficient in our estimate, we drew 1000 values for the odds ratio using the normal distribution and standard error of the parameter. We provide a 95% uncertainty interval which is given by the 2.5<sup>th</sup> and 97.5<sup>th</sup> percentile values of the 1000 estimates. From this we derived 1000 estimates of the ER and the subsequent excess arrests, E, which is calculated as  $E = a_1 - [a_1/(1 + ER)]$ , where  $a_1$  represents the number of arrests in the Risk period.

## **2. Direction calculation**

The rate difference was estimated as follows, where  $a$  represents the number of arrests,  $t$  represents the time at risk and  $n$  represents the number of people at risk. We use the subscripts 1 and 2 to represent the Risk and Non-Risk periods respectively. Thus, the rate difference can be calculated as  $[a_1/(t_1n_1)] - [a_2/(t_2n_2)]$ .

If we assume that the number of people at risk remained constant throughout the year, we can rearrange, such that  $1/n[(a_1/t_1) - (a_2/t_2)]$

The excess arrests  $E$  are given by the rate difference multiplied by the person time at risk in the Risk period. Thus,  $E = 1/n [(a_1/t_1) - (a_2/t_2)]nt_1$

Simplifying,  $E = [(a_1/t_1) - (a_2/t_2)]t_1$

To reflect the uncertainty in the observed rates, we drew 1000 random values for  $a_1$  and  $a_2$  using separate Poisson distributions where the mean value was given by the observed.

The direct calculation did not adjust for ambient temperature which is known to be associated with increased risk of out-of-hospital cardiac arrest. It is reasonable to expect that the estimate derived from the direct calculation might overestimate the number of attributable OHCA's and therefore we used the odds ratio for temperature estimated in the model for the 48 hour average of PM<sub>2.5</sub> to adjust the estimate.

**Table S2.** Estimated percentage difference in the relative odds of out-of-hospital cardiac arrest for an interquartile range increase in individual pollutants based on conditional logistic regression models adjusted for temperature and relative humidity. Single Pollutant models by age, sex and non-fire vs fire period.

| Period <sup>a</sup>       | Stratification | Lag<br>(hours) | PM <sub>2.5</sub><br>% difference<br>(95% CI) | PM <sub>10</sub><br>% difference<br>(95% CI) | CO %<br>% difference<br>(95% CI) |
|---------------------------|----------------|----------------|---|--|----------------------------------|
| All data (07/06 to 06/07) | All data       | 0              | 1.35 (-1.02, 3.77)                            | -0.19 (-4.06, 3.83)                          | -0.58 (-4.84, 3.87)              |
| All data (07/06 to 06/07) | All data       | 1              | 1.21 (-1.23, 3.71)                            | 1.45 (-2.49, 5.55)                           | -0.38 (-4.72, 4.15)              |
| All data (07/06 to 06/07) | All data       | 2              | 0.13 (-2.36, 2.68)                            | -0.39 (-4.34, 3.73)                          | 0.40 (-3.93, 4.93)               |
| All data (07/06 to 06/07) | All data       | 0-2            | 1.30 (-1.15, 3.81)                            | 0.54 (-3.50, 4.75)                           | -0.16 (-4.54, 4.42)              |
| All data (07/06 to 06/07) | All data       | 0-3            | 0.94 (-1.58, 3.53)                            | 0.05 (-4.10, 4.39)                           | -0.07 (-4.61, 4.68)              |
| All data (07/06 to 06/07) | All data       | 0-4            | 0.93 (-1.66, 3.59)                            | 0.41 (-3.87, 4.87)                           | -0.30 (-5.02, 4.65)              |
| All data (07/06 to 06/07) | All data       | 0-8            | 1.74 (-1.04, 4.59)                            | 2.57 (-2.09, 7.46)                           | 1.39 (-3.94, 7.03)               |
| All data (07/06 to 06/07) | All data       | 0-12           | 1.84 (-1.05, 4.82)                            | 2.81 (-2.02, 7.88)                           | 0.97 (-4.33, 6.57)               |
| All data (07/06 to 06/07) | All data       | 0-24           | 3.03 (-0.32, 6.50) *                          | 3.90 (-1.49, 9.58)                           | 2.74 (-3.32, 9.19)               |
| All data (07/06 to 06/07) | All data       | 0-48           | 4.36 (0.20, 8.69) **                          | 4.02 (-2.39, 10.84)                          | 5.55 (-1.60, 13.23)              |
| All data (07/06 to 06/07) | 35-64 years    | 0              | 1.18 (-2.38, 4.87)                            | -0.07 (-6.05, 6.29)                          | -0.83 (-8.27, 7.22)              |
| All data (07/06 to 06/07) | 35-64 years    | 1              | 0.73 (-2.88, 4.47)                            | 0.48 (-5.51, 6.85)                           | -0.85 (-8.96, 7.98)              |
| All data (07/06 to 06/07) | 35-64 years    | 2              | -0.47 (-4.18, 3.38)                           | -1.13 (-7.31, 5.46)                          | -3.01 (-11.18, 5.91)             |
| All data (07/06 to 06/07) | 35-64 years    | 0-2            | 1.05 (-2.60, 4.83)                            | 0.12 (-6.03, 6.68)                           | 0.05 (-7.90, 8.70)               |
| All data (07/06 to 06/07) | 35-64 years    | 0-3            | 0.60 (-3.14, 4.47)                            | -0.59 (-6.92, 6.16)                          | -0.79 (-9.14, 8.32)              |
| All data (07/06 to 06/07) | 35-64 years    | 0-4            | 0.33 (-3.51, 4.32)                            | -0.47 (-6.96, 6.47)                          | -1.01 (-9.80, 8.64)              |
| All data (07/06 to 06/07) | 35-64 years    | 0-8            | 0.49 (-3.70, 4.86)                            | 0.35 (-6.73, 7.96)                           | 2.70 (-7.62, 14.19)              |
| All data (07/06 to 06/07) | 35-64 years    | 0-12           | 1.75 (-2.75, 6.45)                            | 2.12 (-5.51, 10.36)                          | 5.02 (-5.47, 16.67)              |
| All data (07/06 to 06/07) | 35-64 years    | 0-24           | 5.35 (-0.25, 11.26) *                         | 7.32 (-1.91, 17.41)                          | 10.82 (-1.21, 24.31) *           |
| All data (07/06 to 06/07) | 35-64 years    | 0-48           | 7.80 (0.29, 15.86) **                         | 9.23 (-2.60, 22.49)                          | 17.60 (2.87, 34.45) **           |
| All data (07/06 to 06/07) | 65-74 years    | 0              | 4.14 (-2.07, 10.73)                           | 0.77 (-8.94, 11.51)                          | 3.51 (-6.15, 14.17)              |
| All data (07/06 to 06/07) | 65-74 years    | 1              | 3.22 (-3.04, 9.88)                            | 2.69 (-7.12, 13.55)                          | 1.44 (-8.09, 11.97)              |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | 65-74 years           | 2                      | 2.72 (-3.66, 9.52)                                    | 4.56 (-5.37, 15.53)                                  | 5.30 (-4.50, 16.10)                       |
| All data (07/06 to 06/07) | 65-74 years           | 0-2                    | 3.84 (-2.60, 10.72)                                   | 2.05 (-8.14, 13.38)                                  | 4.37 (-5.54, 15.32)                       |
| All data (07/06 to 06/07) | 65-74 years           | 0-3                    | 3.71 (-2.92, 10.80)                                   | 3.06 (-7.49, 14.82)                                  | 4.39 (-5.84, 15.73)                       |
| All data (07/06 to 06/07) | 65-74 years           | 0-4                    | 3.87 (-2.92, 11.13)                                   | 4.38 (-6.58, 16.62)                                  | 4.09 (-6.41, 15.77)                       |
| All data (07/06 to 06/07) | 65-74 years           | 0-8                    | 4.93 (-2.17, 12.55)                                   | 6.07 (-5.64, 19.23)                                  | 3.59 (-7.68, 16.22)                       |
| All data (07/06 to 06/07) | 65-74 years           | 0-12                   | 4.45 (-2.71, 12.13)                                   | 4.45 (-7.06, 17.38)                                  | -0.70 (-11.59, 11.53)                     |
| All data (07/06 to 06/07) | 65-74 years           | 0-24                   | 4.34 (-3.80, 13.17)                                   | 1.83 (-10.50, 15.85)                                 | -3.80 (-16.16, 10.39)                     |
| All data (07/06 to 06/07) | 65-74 years           | 0-48                   | 3.36 (-6.62, 14.41)                                   | -2.21 (-16.38, 14.35)                                | -2.31 (-16.64, 14.49)                     |
| All data (07/06 to 06/07) | 75+ years             | 0                      | 0.54 (-3.12, 4.35)                                    | -0.76 (-6.55, 5.39)                                  | -2.60 (-8.60, 3.80)                       |
| All data (07/06 to 06/07) | 75+ years             | 1                      | 0.77 (-3.09, 4.78)                                    | 1.76 (-4.28, 8.19)                                   | -1.59 (-7.53, 4.73)                       |
| All data (07/06 to 06/07) | 75+ years             | 2                      | -0.29 (-4.21, 3.80)                                   | -1.54 (-7.45, 4.75)                                  | -0.14 (-6.02, 6.10)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-2                    | 0.57 (-3.26, 4.56)                                    | 0.27 (-5.86, 6.79)                                   | -2.70 (-8.73, 3.73)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-3                    | 0.24 (-3.73, 4.38)                                    | -0.50 (-6.82, 6.23)                                  | -2.00 (-8.21, 4.63)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-4                    | 0.43 (-3.65, 4.69)                                    | -0.26 (-6.76, 6.70)                                  | -2.14 (-8.57, 4.75)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-8                    | 1.77 (-2.55, 6.28)                                    | 3.52 (-3.58, 11.13)                                  | -0.59 (-7.85, 7.24)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-12                   | 0.88 (-3.54, 5.50)                                    | 2.97 (-4.23, 10.71)                                  | -0.74 (-7.96, 7.05)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-24                   | 0.65 (-4.20, 5.73)                                    | 2.31 (-5.34, 10.57)                                  | 0.39 (-7.80, 9.31)                        |
| All data (07/06 to 06/07) | 75+ years             | 0-48                   | 2.60 (-3.05, 8.59)                                    | 3.19 (-5.51, 12.69)                                  | 2.37 (-7.15, 12.86)                       |
| All data (07/06 to 06/07) | Male                  | 0                      | 2.23 (-0.73, 5.29)                                    | 1.38 (-3.48, 6.48)                                   | 1.14 (-4.30, 6.90)                        |
| All data (07/06 to 06/07) | Male                  | 1                      | 2.63 (-0.40, 5.76) *                                  | 2.58 (-2.36, 7.78)                                   | 2.04 (-3.54, 7.95)                        |
| All data (07/06 to 06/07) | Male                  | 2                      | 0.96 (-2.09, 4.11)                                    | 1.05 (-3.92, 6.27)                                   | 3.26 (-2.36, 9.20)                        |
| All data (07/06 to 06/07) | Male                  | 0-2                    | 2.47 (-0.60, 5.63)                                    | 1.88 (-3.20, 7.22)                                   | 2.40 (-3.21, 8.33)                        |
| All data (07/06 to 06/07) | Male                  | 0-3                    | 2.06 (-1.08, 5.29)                                    | 1.50 (-3.72, 7.00)                                   | 2.86 (-2.97, 9.04)                        |
| All data (07/06 to 06/07) | Male                  | 0-4                    | 2.01 (-1.22, 5.34)                                    | 1.91 (-3.48, 7.59)                                   | 2.88 (-3.16, 9.30)                        |
| All data (07/06 to 06/07) | Male                  | 0-8                    | 2.54 (-0.90, 6.10)                                    | 4.05 (-1.79, 10.24)                                  | 6.30 (-0.64, 13.71) *                     |
| All data (07/06 to 06/07) | Male                  | 0-12                   | 2.74 (-0.87, 6.47)                                    | 4.36 (-1.72, 10.82)                                  | 4.91 (-1.98, 12.29)                       |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | Male                  | 0-24                   | 4.89 (0.69, 9.27) **                                  | 6.61 (-0.18, 13.86) *                                | 7.99 (0.06, 16.55) **                     |
| All data (07/06 to 06/07) | Male                  | 0-48                   | 7.76 (2.48, 13.31) #                                  | 8.36 (0.12, 17.27) **                                | 9.96 (0.61, 20.18) **                     |
| All data (07/06 to 06/07) | Female                | 0                      | -0.22 (-4.17, 3.91)                                   | -2.91 (-9.26, 3.89)                                  | -4.07 (-10.80, 3.17)                      |
| All data (07/06 to 06/07) | Female                | 1                      | -1.38 (-5.57, 3.00)                                   | -0.41 (-6.85, 6.46)                                  | -4.88 (-11.64, 2.39)                      |
| All data (07/06 to 06/07) | Female                | 2                      | -1.48 (-5.74, 2.98)                                   | -2.77 (-9.21, 4.11)                                  | -4.58 (-11.27, 2.63)                      |
| All data (07/06 to 06/07) | Female                | 0-2                    | -0.78 (-4.92, 3.54)                                   | -1.70 (-8.30, 5.37)                                  | -5.08 (-11.98, 2.36)                      |
| All data (07/06 to 06/07) | Female                | 0-3                    | -1.08 (-5.37, 3.39)                                   | -2.38 (-9.16, 4.92)                                  | -5.55 (-12.64, 2.11)                      |
| All data (07/06 to 06/07) | Female                | 0-4                    | -1.01 (-5.37, 3.56)                                   | -2.08 (-9.03, 5.40)                                  | -6.25 (-13.62, 1.75)                      |
| All data (07/06 to 06/07) | Female                | 0-8                    | 0.23 (-4.46, 5.14)                                    | 0.05 (-7.54, 8.25)                                   | -7.17 (-15.26, 1.69)                      |
| All data (07/06 to 06/07) | Female                | 0-12                   | 0.24 (-4.59, 5.31)                                    | 0.27 (-7.52, 8.73)                                   | -5.75 (-13.82, 3.07)                      |
| All data (07/06 to 06/07) | Female                | 0-24                   | -0.43 (-6.04, 5.50)                                   | -0.92 (-9.63, 8.63)                                  | -5.98 (-15.09, 4.10)                      |
| All data (07/06 to 06/07) | Female                | 0-48                   | -1.84 (-8.61, 5.43)                                   | -3.41 (-13.35, 7.66)                                 | -1.42 (-12.15, 10.63)                     |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0                      | 1.64 (-2.79, 6.27)                                    | 0.01 (-7.37, 7.99)                                   | 1.36 (-7.31, 10.85)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 1                      | 1.83 (-2.55, 6.41)                                    | 2.35 (-4.99, 10.26)                                  | 1.99 (-7.43, 12.38)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 2                      | 0.02 (-4.37, 4.60)                                    | -0.62 (-8.01, 7.36)                                  | -1.20 (-10.57, 9.15)                      |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-2                    | 1.80 (-2.69, 6.50)                                    | 1.01 (-6.57, 9.20)                                   | 2.65 (-6.57, 12.79)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-3                    | 1.31 (-3.23, 6.07)                                    | 0.12 (-7.61, 8.50)                                   | 2.02 (-7.64, 12.69)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-4                    | 0.96 (-3.70, 5.84)                                    | 0.28 (-7.63, 8.88)                                   | 2.50 (-7.72, 13.86)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-8                    | 0.66 (-4.50, 6.10)                                    | 0.68 (-7.98, 10.15)                                  | 7.65 (-4.53, 21.40)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-12                   | 1.59 (-3.89, 7.38)                                    | 2.13 (-7.08, 12.26)                                  | 8.81 (-3.61, 22.83)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-24                   | 5.92 (-0.77, 13.07) *                                 | 8.19 (-2.72, 20.33)                                  | 17.16 (2.72, 33.63) **                    |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-48                   | 9.35 (0.63, 18.83) **                                 | 11.11 (-2.64, 26.81)                                 | 21.13 (4.08, 40.97) **                    |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0                      | 3.79 (-3.81, 12.00)                                   | 1.56 (-10.23, 14.90)                                 | -0.94 (-13.08, 12.91)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 1                      | 3.34 (-4.60, 11.93)                                   | 2.07 (-10.04, 15.82)                                 | -1.57 (-13.49, 11.98)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 2                      | 2.54 (-5.37, 11.11)                                   | 7.49 (-5.05, 21.69)                                  | 5.49 (-6.97, 19.64)                       |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-2                    | 3.58 (-4.54, 12.38)                                   | 2.06 (-10.53, 16.41)                                 | 1.00 (-11.35, 15.07)                      |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-3                    | 3.43 (-4.95, 12.55)                                   | 4.33 (-8.87, 19.44)                                  | 1.60 (-11.23, 16.28)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-4                    | 3.27 (-5.26, 12.57)                                   | 5.52 (-8.11, 21.17)                                  | 1.48 (-11.47, 16.32)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-8                    | 3.42 (-5.21, 12.84)                                   | 7.16 (-7.33, 23.91)                                  | 1.40 (-12.18, 17.08)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-12                   | 2.57 (-6.20, 12.15)                                   | 4.98 (-9.27, 21.47)                                  | -3.18 (-16.29, 11.99)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-24                   | 3.64 (-6.35, 14.70)                                   | 3.84 (-11.30, 21.57)                                 | -1.71 (-16.86, 16.19)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-48                   | 3.46 (-8.74, 17.28)                                   | 1.68 (-15.93, 22.99)                                 | 1.86 (-16.29, 23.93)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 0                      | 2.23 (-2.35, 7.03)                                    | 2.57 (-4.86, 10.59)                                  | 1.51 (-6.68, 10.41)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 1                      | 3.04 (-1.84, 8.17)                                    | 2.69 (-5.05, 11.07)                                  | 2.76 (-5.39, 11.62)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 2                      | 1.34 (-3.66, 6.61)                                    | 0.14 (-7.64, 8.57)                                   | 4.91 (-3.30, 13.83)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-2                    | 2.66 (-2.15, 7.70)                                    | 2.53 (-5.31, 11.02)                                  | 2.19 (-6.04, 11.13)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-3                    | 2.28 (-2.70, 7.52)                                    | 1.76 (-6.33, 10.55)                                  | 3.39 (-5.12, 12.65)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-4                    | 2.63 (-2.55, 8.08)                                    | 2.11 (-6.29, 11.27)                                  | 3.22 (-5.54, 12.80)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-8                    | 4.10 (-1.24, 9.72)                                    | 6.44 (-2.62, 16.34)                                  | 7.38 (-2.78, 18.61)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-12                   | 3.88 (-1.66, 9.73)                                    | 6.48 (-2.89, 16.76)                                  | 6.02 (-4.11, 17.22)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-24                   | 4.40 (-1.85, 11.05)                                   | 6.65 (-3.45, 17.80)                                  | 5.49 (-5.93, 18.30)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-48                   | 8.13 (0.52, 16.31) **                                 | 9.34 (-2.62, 22.76)                                  | 5.90 (-7.36, 21.06)                       |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0                      | 0.54 (-5.40, 6.86)                                    | 0.04 (-9.91, 11.10)                                  | -6.97 (-20.68, 9.09)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 1                      | -1.56 (-8.10, 5.46)                                   | -3.69 (-14.23, 8.15)                                 | -10.31 (-25.16, 7.50)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 2                      | -1.54 (-8.47, 5.93)                                   | -2.04 (-13.02, 10.32)                                | -9.85 (-25.35, 8.87)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-2                    | -0.26 (-6.54, 6.44)                                   | -1.44 (-11.84, 10.19)                                | -8.36 (-23.11, 9.22)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-3                    | -0.74 (-7.30, 6.29)                                   | -1.88 (-12.67, 10.25)                                | -10.19 (-25.59, 8.38)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-4                    | -0.87 (-7.61, 6.37)                                   | -1.92 (-12.97, 10.54)                                | -12.59 (-28.44, 6.77)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-8                    | 0.25 (-6.79, 7.81)                                    | -0.38 (-12.25, 13.08)                                | -12.84 (-30.56, 9.39)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-12                   | 2.07 (-5.63, 10.40)                                   | 1.78 (-11.25, 16.72)                                 | -6.06 (-24.20, 16.42)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-24                   | 3.82 (-6.14, 14.83)                                   | 4.40 (-11.95, 23.79)                                 | -8.10 (-27.83, 17.02)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-48                   | 2.59 (-11.47, 18.88)                                  | 2.48 (-18.71, 29.20)                                 | 4.93 (-21.23, 39.80)                      |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | Females, 65-74 years  | 0                      | 5.05 (-5.38, 16.64)                                   | -0.40 (-16.68, 19.05)                                | 9.83 (-5.33, 27.41)                       |
| All data (07/06 to 06/07) | Females, 65-74 years  | 1                      | 3.46 (-6.51, 14.50)                                   | 4.28 (-11.69, 23.14)                                 | 6.41 (-8.74, 24.08)                       |
| All data (07/06 to 06/07) | Females, 65-74 years  | 2                      | 3.38 (-7.12, 15.07)                                   | -0.22 (-16.15, 18.74)                                | 5.16 (-9.93, 22.79)                       |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-2                    | 4.57 (-5.76, 16.04)                                   | 2.53 (-13.99, 22.23)                                 | 9.62 (-6.09, 27.95)                       |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-3                    | 4.41 (-6.14, 16.14)                                   | 1.33 (-15.48, 21.49)                                 | 8.67 (-7.37, 27.50)                       |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-4                    | 5.04 (-5.78, 17.12)                                   | 2.78 (-14.80, 23.99)                                 | 8.42 (-8.48, 28.44)                       |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-8                    | 7.96 (-4.35, 21.87)                                   | 4.21 (-14.36, 26.81)                                 | 7.50 (-11.32, 30.32)                      |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-12                   | 8.02 (-4.29, 21.92)                                   | 3.60 (-14.68, 25.80)                                 | 3.80 (-14.44, 25.93)                      |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-24                   | 5.87 (-7.47, 21.14)                                   | -1.95 (-22.06, 23.35)                                | -7.03 (-27.08, 18.54)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-48                   | 3.35 (-13.09, 22.89)                                  | -9.89 (-32.12, 19.62)                                | -8.48 (-30.27, 20.13)                     |
| All data (07/06 to 06/07) | Females, 75+ years    | 0                      | -2.26 (-8.51, 4.42)                                   | -5.79 (-14.96, 4.37)                                 | -7.61 (-16.27, 1.94)                      |
| All data (07/06 to 06/07) | Females, 75+ years    | 1                      | -2.81 (-9.31, 4.15)                                   | 0.75 (-8.68, 11.16)                                  | -6.83 (-15.31, 2.51)                      |
| All data (07/06 to 06/07) | Females, 75+ years    | 2                      | -2.66 (-8.94, 4.06)                                   | -3.73 (-12.56, 6.01)                                 | -5.84 (-14.14, 3.27)                      |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-2                    | -2.83 (-9.36, 4.18)                                   | -2.90 (-12.56, 7.82)                                 | -8.77 (-17.43, 0.80) *                    |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-3                    | -3.03 (-9.70, 4.13)                                   | -3.69 (-13.53, 7.26)                                 | -8.65 (-17.51, 1.17) *                    |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-4                    | -2.95 (-9.71, 4.31)                                   | -3.51 (-13.54, 7.70)                                 | -8.91 (-18.10, 1.31) *                    |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-8                    | -2.63 (-10.13, 5.50)                                  | -1.06 (-12.23, 11.53)                                | -10.20 (-20.17, 1.01) *                   |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-12                   | -4.23 (-11.70, 3.88)                                  | -1.96 (-12.99, 10.46)                                | -8.59 (-18.58, 2.63)                      |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-24                   | -5.26 (-13.15, 3.35)                                  | -3.62 (-15.08, 9.38)                                 | -5.32 (-16.66, 7.56)                      |
| All data (07/06 to 06/07) | Females, 75+ years    | 0-48                   | -4.93 (-13.50, 4.48)                                  | -4.10 (-16.46, 10.09)                                | -1.14 (-14.32, 14.08)                     |
| All data (07/06 to 06/07) | All data              | 0                      | 5.89 (-4.60, 17.53)                                   | -3.22 (-10.86, 5.06)                                 | -3.03 (-7.12, 1.24)                       |
| All data (07/06 to 06/07) | All data              | 1                      | 1.85 (-8.09, 12.87)                                   | 2.70 (-5.48, 11.59)                                  | -1.38 (-5.50, 2.91)                       |
| All data (07/06 to 06/07) | All data              | 2                      | 0.94 (-8.54, 11.39)                                   | 3.15 (-5.24, 12.29)                                  | -3.27 (-7.45, 1.10)                       |
| All data (07/06 to 06/07) | All data              | 0-2                    | 4.32 (-6.08, 15.88)                                   | 0.11 (-8.00, 8.92)                                   | -2.31 (-6.49, 2.06)                       |
| All data (07/06 to 06/07) | All data              | 0-3                    | 3.70 (-6.76, 15.33)                                   | 0.74 (-7.77, 10.04)                                  | -2.91 (-7.27, 1.64)                       |
| All data (07/06 to 06/07) | All data              | 0-4                    | 3.45 (-7.04, 15.13)                                   | 0.76 (-8.11, 10.48)                                  | -1.37 (-5.95, 3.43)                       |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | All data              | 0-8                    | 6.87 (-4.19, 19.20)                                   | 2.47 (-7.76, 13.83)                                  | -1.94 (-7.28, 3.71)                       |
| All data (07/06 to 06/07) | All data              | 0-12                   | 7.86 (-4.07, 21.27)                                   | 1.13 (-9.64, 13.17)                                  | -2.75 (-8.52, 3.39)                       |
| All data (07/06 to 06/07) | All data              | 0-24                   | 4.33 (-8.67, 19.18)                                   | 1.76 (-10.42, 15.59)                                 | -2.60 (-9.59, 4.94)                       |
| All data (07/06 to 06/07) | All data              | 0-48                   | -0.32 (-14.23, 15.85)                                 | 7.26 (-7.65, 24.57)                                  | -0.56 (-9.74, 9.54)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0                      | -7.92 (-23.16, 10.34)                                 | 2.06 (-11.42, 17.59)                                 | -1.10 (-8.92, 7.39)                       |
| All data (07/06 to 06/07) | 35-64 years           | 1                      | -11.19 (-25.92, 6.46)                                 | 4.85 (-9.44, 21.39)                                  | 0.01 (-7.69, 8.35)                        |
| All data (07/06 to 06/07) | 35-64 years           | 2                      | -9.34 (-23.93, 8.06)                                  | -0.27 (-14.58, 16.44)                                | 2.27 (-5.50, 10.67)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0-2                    | -10.46 (-25.58, 7.74)                                 | 5.10 (-9.20, 21.66)                                  | -0.54 (-8.62, 8.26)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0-3                    | -11.46 (-26.76, 7.04)                                 | 4.14 (-10.83, 21.61)                                 | 0.62 (-7.82, 9.84)                        |
| All data (07/06 to 06/07) | 35-64 years           | 0-4                    | -10.66 (-26.23, 8.20)                                 | 1.10 (-14.14, 19.06)                                 | 1.76 (-7.16, 11.54)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0-8                    | -5.39 (-22.34, 15.26)                                 | 1.12 (-16.50, 22.45)                                 | 4.24 (-6.16, 15.79)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0-12                   | -5.52 (-23.63, 16.87)                                 | 3.89 (-15.71, 28.06)                                 | 5.23 (-6.14, 17.99)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0-24                   | -6.76 (-26.87, 18.88)                                 | 15.07 (-9.42, 46.19)                                 | 6.11 (-7.97, 22.34)                       |
| All data (07/06 to 06/07) | 35-64 years           | 0-48                   | -1.83 (-25.02, 28.53)                                 | 20.86 (-9.51, 61.44)                                 | 2.27 (-15.00, 23.05)                      |
| All data (07/06 to 06/07) | 65-74 years           | 0                      | 43.80 (10.84, 86.54) *                                | -5.77 (-22.06, 13.94)                                | -4.78 (-14.12, 5.56)                      |
| All data (07/06 to 06/07) | 65-74 years           | 1                      | 33.72 (4.12, 71.74) **                                | 0.89 (-16.50, 21.91)                                 | -3.07 (-12.46, 7.33)                      |
| All data (07/06 to 06/07) | 65-74 years           | 2                      | 23.49 (-2.46, 56.35) *                                | 3.91 (-13.71, 25.13)                                 | -2.53 (-11.47, 7.31)                      |
| All data (07/06 to 06/07) | 65-74 years           | 0-2                    | 42.81 (10.36, 84.81) *                                | -2.31 (-19.51, 18.57)                                | -4.15 (-13.99, 6.82)                      |
| All data (07/06 to 06/07) | 65-74 years           | 0-3                    | 39.62 (7.90, 80.67) **                                | -1.05 (-18.93, 20.78)                                | -4.41 (-14.41, 6.77)                      |
| All data (07/06 to 06/07) | 65-74 years           | 0-4                    | 36.10 (5.25, 75.99) **                                | 1.38 (-17.41, 24.46)                                 | -0.86 (-11.27, 10.76)                     |
| All data (07/06 to 06/07) | 65-74 years           | 0-8                    | 25.21 (-3.60, 62.63) *                                | 6.80 (-14.64, 33.62)                                 | -5.96 (-17.88, 7.69)                      |
| All data (07/06 to 06/07) | 65-74 years           | 0-12                   | 19.89 (-8.52, 57.13)                                  | 3.27 (-18.71, 31.19)                                 | -9.17 (-21.72, 5.38)                      |
| All data (07/06 to 06/07) | 65-74 years           | 0-24                   | 23.70 (-9.11, 68.37)                                  | -15.77 (-36.99, 12.59)                               | -13.47 (-27.44, 3.18)                     |
| All data (07/06 to 06/07) | 65-74 years           | 0-48                   | 2.41 (-28.25, 46.18)                                  | -14.66 (-39.09, 19.57)                               | -12.53 (-29.79, 8.97)                     |
| All data (07/06 to 06/07) | 75+ years             | 0                      | 7.48 (-7.62, 25.04)                                   | -7.19 (-17.67, 4.62)                                 | -3.62 (-9.12, 2.23)                       |
| All data (07/06 to 06/07) | 75+ years             | 1                      | 2.99 (-11.22, 19.48)                                  | 1.17 (-10.28, 14.08)                                 | -1.73 (-7.32, 4.21)                       |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | 75+ years             | 2                      | 1.87 (-11.54, 17.31)                                  | 4.79 (-7.28, 18.43)                                  | -7.03 (-12.87, , 0.79) **                 |
| All data (07/06 to 06/07) | 75+ years             | 0-2                    | 5.63 (-9.29, 23.00)                                   | -3.44 (-14.62, 9.21)                                 | -2.78 (-8.33, 3.10)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-3                    | 5.37 (-9.59, 22.80)                                   | -1.71 (-13.54, 11.75)                                | -4.29 (-10.14, 1.94)                      |
| All data (07/06 to 06/07) | 75+ years             | 0-4                    | 4.87 (-10.02, 22.23)                                  | -0.72 (-13.17, 13.52)                                | -3.18 (-9.32, 3.38)                       |
| All data (07/06 to 06/07) | 75+ years             | 0-8                    | 10.48 (-5.23, 28.79)                                  | 0.11 (-14.13, 16.72)                                 | -4.05 (-11.15, 3.60)                      |
| All data (07/06 to 06/07) | 75+ years             | 0-12                   | 13.89 (-3.50, 34.42)                                  | -2.72 (-17.29, 14.43)                                | -5.16 (-12.79, 3.14)                      |
| All data (07/06 to 06/07) | 75+ years             | 0-24                   | 7.25 (-11.04, 29.30)                                  | -0.44 (-16.68, 18.96)                                | -4.27 (-13.56, 6.02)                      |
| All data (07/06 to 06/07) | 75+ years             | 0-48                   | 0.59 (-18.59, 24.30)                                  | 7.75 (-12.29, 32.38)                                 | 1.28 (-11.42, 15.80)                      |
| All data (07/06 to 06/07) | Male                  | 0                      | 6.45 (-6.59, 21.30)                                   | -0.98 (-10.67, 9.75)                                 | -3.35 (-8.26, 1.82)                       |
| All data (07/06 to 06/07) | Male                  | 1                      | 1.66 (-10.68, 15.69)                                  | 4.90 (-5.51, 16.45)                                  | -1.13 (-6.16, 4.17)                       |
| All data (07/06 to 06/07) | Male                  | 2                      | 1.13 (-10.56, 14.36)                                  | 5.19 (-5.51, 17.09)                                  | -2.27 (-7.50, 3.26)                       |
| All data (07/06 to 06/07) | Male                  | 0-2                    | 4.44 (-8.50, 19.21)                                   | 3.21 (-7.16, 14.73)                                  | -2.16 (-7.19, 3.15)                       |
| All data (07/06 to 06/07) | Male                  | 0-3                    | 3.68 (-9.28, 18.49)                                   | 3.92 (-7.00, 16.12)                                  | -2.20 (-7.47, 3.38)                       |
| All data (07/06 to 06/07) | Male                  | 0-4                    | 3.87 (-9.14, 18.75)                                   | 3.14 (-8.13, 15.79)                                  | -1.73 (-7.34, 4.23)                       |
| All data (07/06 to 06/07) | Male                  | 0-8                    | 3.81 (-9.41, 18.95)                                   | 7.78 (-5.45, 22.87)                                  | -1.13 (-7.84, 6.07)                       |
| All data (07/06 to 06/07) | Male                  | 0-12                   | 3.62 (-10.48, 19.95)                                  | 7.15 (-6.84, 23.23)                                  | -1.31 (-8.65, 6.61)                       |
| All data (07/06 to 06/07) | Male                  | 0-24                   | 1.77 (-13.82, 20.18)                                  | 8.63 (-7.39, 27.42)                                  | -0.71 (-9.58, 9.03)                       |
| All data (07/06 to 06/07) | Male                  | 0-48                   | 0.70 (-16.53, 21.47)                                  | 13.17 (-6.35, 36.76)                                 | 4.45 (-7.54, 18.00)                       |
| All data (07/06 to 06/07) | Female                | 0                      | 6.76 (-10.25, 27.00)                                  | -8.03 (-19.84, 5.51)                                 | -2.73 (-9.95, 5.07)                       |
| All data (07/06 to 06/07) | Female                | 1                      | 3.49 (-12.60, 22.54)                                  | -1.66 (-14.31, 12.85)                                | -2.18 (-9.15, 5.33)                       |
| All data (07/06 to 06/07) | Female                | 2                      | 1.67 (-13.82, 19.94)                                  | -0.82 (-13.74, 14.04)                                | -5.60 (-12.48, 1.82)                      |
| All data (07/06 to 06/07) | Female                | 0-2                    | 5.70 (-11.11, 25.69)                                  | -5.97 (-18.36, 8.29)                                 | -3.01 (-10.30, 4.88)                      |
| All data (07/06 to 06/07) | Female                | 0-3                    | 5.23 (-11.75, 25.47)                                  | -5.38 (-18.30, 9.59)                                 | -4.88 (-12.30, 3.18)                      |
| All data (07/06 to 06/07) | Female                | 0-4                    | 4.17 (-12.81, 24.46)                                  | -4.24 (-17.86, 11.64)                                | -1.22 (-8.91, 7.13)                       |
| All data (07/06 to 06/07) | Female                | 0-8                    | 13.92 (-5.15, 36.82)                                  | -7.42 (-22.48, 10.57)                                | -3.92 (-12.45, 5.46)                      |
| All data (07/06 to 06/07) | Female                | 0-12                   | 17.05 (-3.82, 42.44)                                  | -9.90 (-25.52, 9.00)                                 | -5.58 (-14.62, 4.43)                      |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | Female                | 0-24                   | 9.56 (-12.28, 36.85)                                  | -10.09 (-27.29, 11.17)                               | -6.12 (-17.05, 6.26)                      |
| All data (07/06 to 06/07) | Female                | 0-48                   | -2.49 (-24.20, 25.44)                                 | -2.76 (-23.92, 24.30)                                | -8.88 (-22.36, 6.95)                      |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0                      | -12.21 (-29.19, 8.83)                                 | 1.60 (-14.17, 20.27)                                 | -1.65 (-10.44, 8.01)                      |
| All data (07/06 to 06/07) | Males, 35-64 years    | 1                      | -15.88 (-32.34, 4.58)                                 | 4.23 (-12.41, 24.04)                                 | -0.63 (-9.37, 8.95)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 2                      | -11.42 (-27.92, 8.86)                                 | 0.25 (-16.37, 20.18)                                 | 2.80 (-6.10, 12.54)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-2                    | -15.10 (-31.94, 5.91)                                 | 4.44 (-12.22, 24.26)                                 | -1.05 (-10.24, 9.07)                      |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-3                    | -16.00 (-33.03, 5.36)                                 | 4.21 (-13.30, 25.26)                                 | 0.74 (-8.92, 11.42)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-4                    | -15.51 (-32.77, 6.17)                                 | 1.76 (-16.06, 23.36)                                 | 2.09 (-8.24, 13.58)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-8                    | -14.40 (-32.52, 8.58)                                 | 8.08 (-13.61, 35.22)                                 | 8.09 (-4.41, 22.23)                       |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-12                   | -16.86 (-35.53, 7.23)                                 | 12.29 (-11.94, 43.19)                                | 10.22 (-3.54, 25.95)                      |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-24                   | -14.48 (-35.81, 13.93)                                | 24.54 (-5.43, 63.99)                                 | 12.98 (-4.25, 33.31)                      |
| All data (07/06 to 06/07) | Males, 35-64 years    | 0-48                   | -4.80 (-30.50, 30.41)                                 | 26.96 (-8.91, 76.98)                                 | 8.26 (-12.56, 34.04)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0                      | 41.86 (1.91, 97.49) **                                | -8.40 (-28.02, 16.57)                                | -5.84 (-16.78, 6.53)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 1                      | 28.93 (-5.92, 76.70)                                  | -0.42 (-21.34, 26.05)                                | -2.41 (-13.55, 10.16)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 2                      | 24.87 (-7.09, 67.81)                                  | 2.20 (-19.07, 29.07)                                 | -1.98 (-13.42, 10.97)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-2                    | 40.03 (1.09, 93.97) **                                | -3.59 (-24.38, 22.91)                                | -4.74 (-16.37, 8.50)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-3                    | 38.37 (-0.17, 91.78) *                                | -2.84 (-24.40, 24.88)                                | -4.36 (-16.53, 9.59)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-4                    | 36.67 (-1.16, 88.98) *                                | -0.91 (-23.45, 28.27)                                | -5.34 (-18.08, 9.38)                      |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-8                    | 27.93 (-7.28, 76.50)                                  | 3.74 (-21.36, 36.86)                                 | -12.09 (-25.77, 4.11)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-12                   | 25.03 (-10.18, 74.06)                                 | 0.65 (-24.75, 34.62)                                 | -14.82 (-29.15, 2.39) *                   |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-24                   | 27.19 (-13.15, 86.26)                                 | -13.83 (-39.65, 23.04)                               | -15.82 (-32.00, 4.22)                     |
| All data (07/06 to 06/07) | Males, 65-74 years    | 0-48                   | 10.00 (-29.28, 71.10)                                 | -13.69 (-43.04, 30.79)                               | -10.17 (-30.99, 16.94)                    |
| All data (07/06 to 06/07) | Males, 75+ years      | 0                      | 15.44 (-5.27, 40.68)                                  | -1.85 (-16.00, 14.67)                                | -3.55 (-10.43, 3.86)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 1                      | 9.68 (-9.69, 33.21)                                   | 6.49 (-9.15, 24.82)                                  | -1.08 (-8.26, 6.67)                       |
| All data (07/06 to 06/07) | Males, 75+ years      | 2                      | 4.69 (-12.88, 25.81)                                  | 10.31 (-6.38, 29.98)                                 | -6.03 (-13.72, 2.34)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-2                    | 12.88 (-7.55, 37.82)                                  | 3.47 (-11.93, 21.56)                                 | -1.99 (-8.85, 5.39)                       |

| <b>Period<sup>a</sup></b> | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|---------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07) | Males, 75+ years      | 0-3                    | 11.65 (-8.52, 36.27)                                  | 5.34 (-11.01, 24.69)                                 | -3.00 (-10.28, 4.87)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-4                    | 11.53 (-8.56, 36.02)                                  | 4.74 (-12.22, 24.97)                                 | -2.55 (-10.30, 5.87)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-8                    | 11.40 (-8.55, 35.70)                                  | 7.65 (-11.93, 31.57)                                 | -2.71 (-12.09, 7.66)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-12                   | 13.76 (-8.26, 41.07)                                  | 4.89 (-15.30, 29.89)                                 | -3.81 (-14.03, 7.61)                      |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-24                   | 7.93 (-15.39, 37.69)                                  | 5.62 (-16.73, 33.97)                                 | -4.02 (-16.26, 10.02)                     |
| All data (07/06 to 06/07) | Males, 75+ years      | 0-48                   | 2.20 (-22.53, 34.83)                                  | 16.17 (-12.08, 53.50)                                | 7.70 (-10.23, 29.22)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0                      | 5.81 (-24.11, 47.52)                                  | 2.76 (-20.92, 33.52)                                 | 0.45 (-15.56, 19.49)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 1                      | 4.71 (-23.99, 44.26)                                  | 4.48 (-20.60, 37.48)                                 | 1.66 (-13.73, 19.79)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 2                      | -0.77 (-28.96, 38.59)                                 | -1.98 (-27.48, 32.47)                                | 0.62 (-14.48, 18.38)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-2                    | 4.98 (-24.61, 46.18)                                  | 5.71 (-19.51, 38.84)                                 | 0.83 (-15.15, 19.81)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-3                    | 3.83 (-26.15, 45.99)                                  | 3.24 (-22.79, 38.04)                                 | 0.15 (-16.19, 19.66)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-4                    | 5.88 (-25.11, 49.68)                                  | -1.25 (-27.72, 34.92)                                | 0.77 (-15.94, 20.79)                      |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-8                    | 23.58 (-13.47, 76.50)                                 | -15.43 (-41.95, 23.20)                               | -5.56 (-23.15, 16.07)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-12                   | 33.94 (-9.47, 98.16)                                  | -16.98 (-45.33, 26.07)                               | -8.21 (-26.74, 14.99)                     |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-24                   | 22.07 (-23.00, 93.54)                                 | -12.11 (-46.07, 43.23)                               | -12.70 (-34.23, 15.87)                    |
| All data (07/06 to 06/07) | Females, 35-64 years  | 0-48                   | 13.56 (-33.25, 93.19)                                 | 0.70 (-44.25, 81.86)                                 | -15.13 (-41.65, 23.46)                    |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0                      | 49.33 (-2.37, 128.42) *                               | -2.27 (-28.39, 33.38)                                | -2.12 (-19.03, 18.34)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 1                      | 43.48 (-5.33, 117.44) *                               | 3.34 (-24.90, 42.20)                                 | -4.26 (-20.57, 15.40)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 2                      | 22.97 (-17.19, 82.60)                                 | 6.17 (-22.01, 44.52)                                 | -3.94 (-17.91, 12.41)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-2                    | 49.32 (-2.38, 128.41) *                               | -0.72 (-28.16, 37.20)                                | -2.57 (-19.92, 18.54)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-3                    | 43.30 (-6.13, 118.76) *                               | 1.38 (-27.09, 40.96)                                 | -4.65 (-21.13, 15.27)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-4                    | 36.62 (-10.61, 108.83)                                | 4.54 (-25.50, 46.69)                                 | 5.95 (-10.82, 25.87)                      |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-8                    | 20.56 (-23.22, 89.32)                                 | 11.84 (-23.65, 63.83)                                | 6.66 (-15.36, 34.41)                      |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-12                   | 10.05 (-31.55, 76.91)                                 | 8.08 (-29.13, 64.84)                                 | 2.64 (-20.45, 32.42)                      |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-24                   | 15.16 (-31.98, 94.97)                                 | -18.92 (-50.79, 33.60)                               | -7.25 (-32.20, 26.89)                     |
| All data (07/06 to 06/07) | Females, 65-74 years  | 0-48                   | -13.87 (-53.07, 58.09)                                | -13.95 (-51.75, 53.45)                               | -16.24 (-43.86, 24.96)                    |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| All data (07/06 to 06/07)    | Females, 75+ years    | 0                      | -2.82 (-23.30, 23.13)                                 | -14.56 (-29.18, 3.08)                                | -3.70 (-12.63, 6.14)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 1                      | -5.68 (-25.13, 18.82)                                 | -5.64 (-21.46, 13.36)                                | -2.73 (-11.38, 6.77)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 2                      | -2.02 (-21.39, 22.14)                                 | -2.00 (-18.47, 17.79)                                | -8.27 (-17.03, 1.40) *                    |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-2                    | -3.64 (-23.93, 22.06)                                 | -12.41 (-27.63, 6.01)                                | -4.18 (-13.20, 5.78)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-3                    | -2.96 (-23.64, 23.33)                                 | -10.76 (-26.76, 8.73)                                | -6.45 (-15.76, 3.90)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-4                    | -4.04 (-24.60, 22.11)                                 | -7.90 (-25.03, 13.15)                                | -4.16 (-13.87, 6.64)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-8                    | 9.16 (-14.48, 39.32)                                  | -9.76 (-28.90, 14.53)                                | -5.85 (-16.32, 5.93)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-12                   | 13.99 (-12.15, 47.89)                                 | -12.20 (-31.64, 12.75)                               | -6.83 (-17.89, 5.73)                      |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-24                   | 6.37 (-20.59, 42.48)                                  | -7.79 (-29.54, 20.68)                                | -4.66 (-18.28, 11.23)                     |
| All data (07/06 to 06/07)    | Females, 75+ years    | 0-48                   | -1.49 (-29.03, 36.74)                                 | -1.19 (-27.27, 34.24)                                | -5.51 (-22.52, 15.23)                     |
| Fire Season, (11/06 to 3/07) | All data              | 0                      | 1.93 (-0.57, 4.50)                                    | 2.96 (-1.41, 7.53)                                   | 3.89 (-5.96, 14.78)                       |
| Fire Season, (11/06 to 3/07) | All data              | 1                      | 1.49 (-1.11, 4.15)                                    | 3.36 (-1.12, 8.04)                                   | 0.11 (-10.09, 11.48)                      |
| Fire Season, (11/06 to 3/07) | All data              | 2                      | 0.38 (-2.27, 3.10)                                    | 0.91 (-3.55, 5.57)                                   | 0.23 (-10.30, 12.00)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-2                    | 1.69 (-0.91, 4.36)                                    | 3.20 (-1.36, 7.97)                                   | 3.58 (-6.75, 15.05)                       |
| Fire Season, (11/06 to 3/07) | All data              | 0-3                    | 1.35 (-1.33, 4.09)                                    | 2.48 (-2.20, 7.37)                                   | 2.41 (-8.34, 14.41)                       |
| Fire Season, (11/06 to 3/07) | All data              | 0-4                    | 1.30 (-1.45, 4.12)                                    | 2.77 (-2.04, 7.81)                                   | 1.77 (-9.37, 14.28)                       |
| Fire Season, (11/06 to 3/07) | All data              | 0-8                    | 1.99 (-0.98, 5.05)                                    | 4.46 (-0.79, 9.99) *                                 | 5.03 (-7.72, 19.54)                       |
| Fire Season, (11/06 to 3/07) | All data              | 0-12                   | 2.32 (-0.78, 5.53)                                    | 5.39 (-0.08, 11.16) *                                | 8.91 (-4.83, 24.64)                       |
| Fire Season, (11/06 to 3/07) | All data              | 0-24                   | 3.54 (-0.09, 7.31) *                                  | 6.99 (0.80, 13.56) **                                | 16.49 (-0.10, 35.83) *                    |
| Fire Season, (11/06 to 3/07) | All data              | 0-48                   | 5.42 (0.87, 10.17) **                                 | 7.75 (0.28, 15.77) **                                | 24.36 (4.46, 48.04) **                    |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0                      | 1.62 (-2.11, 5.48)                                    | 1.86 (-4.65, 8.82)                                   | 4.34 (-10.82, 22.07)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 1                      | 0.55 (-3.25, 4.50)                                    | 1.02 (-5.50, 7.99)                                   | -1.26 (-16.72, 17.07)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 2                      | -1.00 (-4.98, 3.14)                                   | -1.51 (-8.30, 5.77)                                  | -6.72 (-22.44, 12.19)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-2                    | 1.14 (-2.68, 5.11)                                    | 1.55 (-5.12, 8.70)                                   | 3.90 (-11.89, 22.50)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-3                    | 0.52 (-3.40, 4.60)                                    | 0.31 (-6.53, 7.66)                                   | 0.94 (-15.39, 20.41)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-4                    | 0.14 (-3.90, 4.36)                                    | -0.17 (-7.18, 7.37)                                  | -1.68 (-18.44, 18.53)                     |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-8                    | -0.03 (-4.46, 4.60)                                   | -0.37 (-7.96, 7.85)                                  | -4.21 (-22.64, 18.61)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-12                   | 1.29 (-3.46, 6.28)                                    | 1.72 (-6.48, 10.63)                                  | 4.30 (-16.19, 29.80)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-24                   | 5.31 (-0.64, 11.62) *                                 | 8.44 (-1.71, 19.64)                                  | 27.74 (-1.42, 65.52) *                    |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-48                   | 7.74 (-0.32, 16.46) *                                 | 9.47 (-3.63, 24.35)                                  | 42.55 (3.97, 95.44) **                    |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0                      | 4.69 (-2.12, 11.97)                                   | 7.21 (-4.36, 20.19)                                  | 8.13 (-15.94, 39.10)                      |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 1                      | 3.02 (-3.77, 10.30)                                   | 5.60 (-6.02, 18.66)                                  | -5.00 (-27.29, 24.13)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 2                      | 3.04 (-3.91, 10.50)                                   | 6.02 (-5.63, 19.11)                                  | -1.65 (-24.84, 28.69)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-2                    | 3.90 (-3.12, 11.43)                                   | 6.85 (-5.26, 20.52)                                  | 6.16 (-18.10, 37.61)                      |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-3                    | 3.80 (-3.42, 11.56)                                   | 7.21 (-5.33, 21.41)                                  | 3.21 (-21.39, 35.51)                      |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-4                    | 3.97 (-3.42, 11.93)                                   | 8.48 (-4.59, 23.35)                                  | 3.94 (-21.09, 36.93)                      |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-8                    | 5.70 (-2.14, 14.17)                                   | 11.45 (-2.87, 27.87)                                 | 12.77 (-15.71, 50.88)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-12                   | 5.78 (-2.17, 14.39)                                   | 10.09 (-3.85, 26.05)                                 | 17.74 (-14.00, 61.20)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-24                   | 6.24 (-2.73, 16.04)                                   | 8.85 (-5.91, 25.92)                                  | 18.95 (-17.42, 71.34)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-48                   | 6.10 (-5.03, 18.53)                                   | 6.60 (-10.71, 27.27)                                 | 19.49 (-21.99, 83.03)                     |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0                      | 1.57 (-2.32, 5.61)                                    | 3.09 (-3.61, 10.24)                                  | 1.86 (-12.52, 18.60)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 1                      | 2.03 (-2.11, 6.34)                                    | 5.69 (-1.42, 13.30)                                  | 3.28 (-12.36, 21.70)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 2                      | 1.04 (-3.16, 5.42)                                    | 1.95 (-4.88, 9.27)                                   | 7.22 (-9.15, 26.55)                       |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-2                    | 1.69 (-2.39, 5.93)                                    | 4.26 (-2.84, 11.87)                                  | 2.15 (-13.12, 20.09)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-3                    | 1.58 (-2.65, 5.98)                                    | 3.77 (-3.52, 11.61)                                  | 3.35 (-12.75, 22.41)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-4                    | 1.82 (-2.53, 6.36)                                    | 4.72 (-2.82, 12.85)                                  | 3.91 (-13.01, 24.12)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-8                    | 2.97 (-1.69, 7.86)                                    | 7.99 (-0.31, 16.98) *                                | 9.07 (-10.69, 33.21)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-12                   | 2.17 (-2.60, 7.18)                                    | 7.89 (-0.50, 17.00) *                                | 8.50 (-11.85, 33.54)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-24                   | 1.41 (-3.88, 6.98)                                    | 5.97 (-2.93, 15.69)                                  | 7.44 (-14.36, 34.80)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-48                   | 4.11 (-2.09, 10.71)                                   | 7.85 (-2.40, 19.18)                                  | 16.45 (-8.54, 48.27)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0                      | 2.48 (-0.66, 5.72)                                    | 4.45 (-1.05, 10.26)                                  | 6.91 (-5.80, 21.34)                       |
| Fire Season, (11/06 to 3/07) | Male                  | 1                      | 2.33 (-0.90, 5.67)                                    | 4.15 (-1.43, 10.05)                                  | 4.66 (-8.40, 19.59)                       |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | Male                  | 2                      | 0.58 (-2.69, 3.95)                                    | 1.18 (-4.37, 7.06)                                   | 4.37 (-8.83, 19.47)                       |
| Fire Season, (11/06 to 3/07) | Male                  | 0-2                    | 2.38 (-0.86, 5.74)                                    | 4.31 (-1.41, 10.36)                                  | 7.70 (-5.59, 22.86)                       |
| Fire Season, (11/06 to 3/07) | Male                  | 0-3                    | 1.92 (-1.40, 5.36)                                    | 3.33 (-2.50, 9.52)                                   | 7.59 (-6.19, 23.40)                       |
| Fire Season, (11/06 to 3/07) | Male                  | 0-4                    | 1.79 (-1.63, 5.34)                                    | 3.56 (-2.46, 9.95)                                   | 6.61 (-7.63, 23.04)                       |
| Fire Season, (11/06 to 3/07) | Male                  | 0-8                    | 1.97 (-1.70, 5.77)                                    | 4.33 (-2.15, 11.25)                                  | 12.04 (-4.40, 31.30)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-12                   | 2.48 (-1.37, 6.49)                                    | 5.52 (-1.28, 12.79)                                  | 16.30 (-1.61, 37.48) *                    |
| Fire Season, (11/06 to 3/07) | Male                  | 0-24                   | 4.65 (0.13, 9.39) **                                  | 8.34 (0.63, 16.64) **                                | 24.58 (2.90, 50.81) **                    |
| Fire Season, (11/06 to 3/07) | Male                  | 0-48                   | 8.05 (2.30, 14.13) #                                  | 11.07 (1.55, 21.48) **                               | 35.68 (8.98, 68.92) #                     |
| Fire Season, (11/06 to 3/07) | Female                | 0                      | 0.89 (-3.26, 5.22)                                    | 0.38 (-6.79, 8.09)                                   | -1.32 (-16.18, 16.18)                     |
| Fire Season, (11/06 to 3/07) | Female                | 1                      | -0.11 (-4.49, 4.46)                                   | 1.97 (-5.36, 9.86)                                   | -8.22 (-23.81, 10.55)                     |
| Fire Season, (11/06 to 3/07) | Female                | 2                      | -0.06 (-4.58, 4.66)                                   | 0.61 (-6.74, 8.54)                                   | -7.96 (-24.52, 12.22)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-2                    | 0.39 (-3.94, 4.91)                                    | 1.27 (-6.16, 9.30)                                   | -3.75 (-19.39, 14.93)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-3                    | 0.23 (-4.24, 4.92)                                    | 1.02 (-6.63, 9.29)                                   | -7.11 (-23.42, 12.66)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-4                    | 0.35 (-4.21, 5.14)                                    | 1.48 (-6.35, 9.96)                                   | -7.28 (-24.22, 13.46)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-8                    | 1.90 (-3.09, 7.14)                                    | 4.72 (-3.99, 14.23)                                  | -8.44 (-27.19, 15.14)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-12                   | 1.83 (-3.33, 7.27)                                    | 5.09 (-3.87, 14.88)                                  | -4.52 (-24.35, 20.50)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-24                   | 1.14 (-4.92, 7.59)                                    | 4.08 (-6.04, 15.29)                                  | 0.94 (-22.45, 31.40)                      |
| Fire Season, (11/06 to 3/07) | Female                | 0-48                   | 0.16 (-7.25, 8.16)                                    | 1.26 (-10.41, 14.44)                                 | 4.33 (-22.13, 39.80)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0                      | 2.13 (-2.50, 6.99)                                    | 3.02 (-5.11, 11.84)                                  | 11.99 (-7.82, 36.05)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 1                      | 1.38 (-3.23, 6.22)                                    | 3.27 (-4.72, 11.94)                                  | 5.50 (-14.00, 29.44)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 2                      | -0.78 (-5.49, 4.16)                                   | -1.05 (-9.17, 7.79)                                  | -3.85 (-22.43, 19.17)                     |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-2                    | 1.82 (-2.88, 6.74)                                    | 3.34 (-4.95, 12.34)                                  | 11.67 (-8.69, 36.55)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-3                    | 1.10 (-3.67, 6.11)                                    | 1.61 (-6.79, 10.78)                                  | 7.85 (-12.76, 33.32)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-4                    | 0.65 (-4.26, 5.80)                                    | 0.97 (-7.60, 10.35)                                  | 4.21 (-16.74, 30.44)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-8                    | -0.12 (-5.61, 5.67)                                   | -0.07 (-9.41, 10.23)                                 | 1.41 (-21.92, 31.72)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-12                   | 1.00 (-4.82, 7.17)                                    | 2.03 (-7.94, 13.07)                                  | 8.38 (-17.08, 41.67)                      |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-24                   | 5.85 (-1.28, 13.49)                                   | 9.73 (-2.38, 23.33)                                  | 33.60 (-1.92, 81.99) *                    |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-48                   | 9.48 (0.11, 19.72) **                                 | 12.51 (-2.88, 30.33)                                 | 46.89 (1.74, 112.07) **                   |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0                      | 4.35 (-4.10, 13.55)                                   | 9.81 (-4.67, 26.48)                                  | -4.42 (-31.86, 34.07)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 1                      | 2.59 (-6.15, 12.14)                                   | 5.33 (-9.34, 22.37)                                  | -11.39 (-37.84, 26.31)                    |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 2                      | 2.51 (-6.21, 12.05)                                   | 8.25 (-6.71, 25.60)                                  | -2.02 (-30.37, 37.87)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-2                    | 3.20 (-5.76, 13.01)                                   | 8.07 (-7.31, 26.01)                                  | -4.31 (-32.60, 35.86)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-3                    | 3.11 (-6.14, 13.27)                                   | 9.18 (-6.94, 28.08)                                  | -3.45 (-32.73, 38.58)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-4                    | 3.03 (-6.37, 13.38)                                   | 10.58 (-6.13, 30.25)                                 | -0.10 (-30.10, 42.77)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-8                    | 3.31 (-6.11, 13.67)                                   | 12.02 (-5.42, 32.69)                                 | 13.73 (-20.13, 61.95)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-12                   | 2.80 (-6.77, 13.35)                                   | 8.79 (-7.99, 28.62)                                  | 19.57 (-18.16, 74.70)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-24                   | 3.04 (-7.66, 14.98)                                   | 6.32 (-11.02, 27.03)                                 | 15.20 (-25.48, 78.07)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-48                   | 2.94 (-10.26, 18.08)                                  | 4.85 (-15.58, 30.23)                                 | 17.88 (-29.40, 96.82)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0                      | 2.38 (-2.47, 7.47)                                    | 4.54 (-3.87, 13.68)                                  | 6.11 (-12.53, 28.71)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 1                      | 3.55 (-1.65, 9.03)                                    | 5.48 (-3.39, 15.16)                                  | 10.27 (-10.11, 35.25)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 2                      | 1.75 (-3.55, 7.35)                                    | 1.78 (-6.93, 11.30)                                  | 15.96 (-5.73, 42.63)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-2                    | 2.91 (-2.17, 8.26)                                    | 4.76 (-4.09, 14.43)                                  | 8.20 (-11.57, 32.37)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-3                    | 2.69 (-2.58, 8.24)                                    | 4.08 (-5.01, 14.03)                                  | 11.50 (-9.46, 37.33)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-4                    | 2.98 (-2.51, 8.78)                                    | 5.05 (-4.47, 15.51)                                  | 12.02 (-10.13, 39.63)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-8                    | 3.97 (-1.73, 10.01)                                   | 7.45 (-2.77, 18.74)                                  | 21.64 (-4.83, 55.47)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-12                   | 4.13 (-1.82, 10.44)                                   | 8.86 (-1.83, 20.71)                                  | 23.01 (-5.42, 59.98)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-24                   | 4.65 (-2.16, 11.93)                                   | 9.22 (-2.45, 22.30)                                  | 22.21 (-9.01, 64.14)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-48                   | 9.41 (1.00, 18.53) **                                 | 14.13 (-0.08, 30.36) *                               | 37.68 (-0.33, 90.17) *                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0                      | 1.00 (-5.27, 7.67)                                    | 0.21 (-10.56, 12.27)                                 | -8.58 (-30.98, 21.10)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 1                      | -1.04 (-7.83, 6.24)                                   | -3.77 (-15.38, 9.44)                                 | -16.59 (-40.50, 16.92)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 2                      | -1.32 (-8.67, 6.61)                                   | -2.25 (-14.26, 11.44)                                | -15.18 (-41.61, 23.21)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-2                    | 0.11 (-6.46, 7.15)                                    | -1.47 (-12.75, 11.27)                                | -11.20 (-34.88, 21.08)                    |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-3                    | -0.42 (-7.28, 6.96)                                   | -1.95 (-13.64, 11.32)                                | -13.87 (-38.76, 21.13)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-4                    | -0.68 (-7.75, 6.94)                                   | -2.22 (-14.17, 11.39)                                | -14.64 (-40.21, 21.88)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-8                    | 0.28 (-7.10, 8.23)                                    | -0.91 (-13.50, 13.51)                                | -14.83 (-41.97, 25.00)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-12                   | 1.97 (-6.11, 10.74)                                   | 0.91 (-12.92, 16.92)                                 | -3.42 (-34.27, 41.91)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-24                   | 3.96 (-6.60, 15.71)                                   | 4.74 (-12.97, 26.05)                                 | 13.25 (-30.10, 83.51)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-48                   | 1.90 (-13.22, 19.65)                                  | -0.82 (-23.64, 28.83)                                | 27.25 (-31.50, 136.40)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0                      | 4.65 (-6.35, 16.95)                                   | 1.69 (-16.66, 24.08)                                 | 26.74 (-14.83, 88.60)                     |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 1                      | 3.76 (-6.70, 15.39)                                   | 6.04 (-11.90, 27.62)                                 | 3.82 (-30.33, 54.72)                      |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 2                      | 4.10 (-6.94, 16.46)                                   | 3.17 (-14.86, 25.02)                                 | -2.08 (-36.79, 51.69)                     |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-2                    | 4.47 (-6.36, 16.55)                                   | 4.32 (-14.07, 26.65)                                 | 19.64 (-18.73, 76.14)                     |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-3                    | 4.49 (-6.54, 16.84)                                   | 3.95 (-14.87, 26.93)                                 | 11.25 (-25.93, 67.09)                     |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-4                    | 5.14 (-6.24, 17.90)                                   | 5.03 (-14.76, 29.42)                                 | 8.72 (-29.25, 67.07)                      |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-8                    | 10.27 (-3.68, 26.23)                                  | 10.45 (-12.55, 39.50)                                | 9.17 (-34.83, 82.86)                      |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-12                   | 11.32 (-2.88, 27.61)                                  | 12.47 (-10.78, 41.78)                                | 12.34 (-36.19, 97.78)                     |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-24                   | 10.99 (-3.72, 27.94)                                  | 12.91 (-11.89, 44.70)                                | 24.95 (-35.93, 143.68)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-48                   | 12.20 (-6.87, 35.18)                                  | 10.39 (-18.91, 50.28)                                | 23.71 (-43.53, 170.99)                    |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0                      | -0.23 (-6.80, 6.81)                                   | 0.08 (-10.74, 12.20)                                 | -4.96 (-25.80, 21.75)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 1                      | -0.71 (-7.68, 6.80)                                   | 5.92 (-5.53, 18.76)                                  | -8.06 (-30.41, 21.47)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 2                      | -0.18 (-6.99, 7.12)                                   | 2.22 (-8.43, 14.11)                                  | -6.63 (-29.60, 23.84)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-2                    | -0.71 (-7.64, 6.73)                                   | 3.05 (-8.39, 15.93)                                  | -7.79 (-29.76, 21.03)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-3                    | -0.58 (-7.67, 7.05)                                   | 2.97 (-8.75, 16.20)                                  | -10.59 (-33.29, 19.85)                    |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-4                    | -0.23 (-7.37, 7.46)                                   | 3.99 (-7.93, 17.45)                                  | -9.51 (-33.31, 22.78)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-8                    | 0.67 (-7.45, 9.51)                                    | 8.66 (-4.96, 24.23)                                  | -12.95 (-39.16, 24.53)                    |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-12                   | -1.61 (-9.73, 7.24)                                   | 6.25 (-6.92, 21.28)                                  | -12.91 (-38.93, 24.20)                    |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-24                   | -4.41 (-13.10, 5.16)                                  | 0.67 (-12.70, 16.09)                                 | -12.14 (-39.17, 26.90)                    |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-48                   | -3.70 (-13.07, 6.68)                                  | -0.50 (-14.87, 16.30)                                | -7.19 (-36.18, 34.98)                     |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | All data              | 0                      | 9.13 (-4.75, 25.03)                                   | -5.66 (-17.86, 8.37)                                 | -5.11 (-12.02, 2.34)                      |
| Fire Season, (11/06 to 3/07) | All data              | 1                      | 6.72 (-6.68, 22.03)                                   | -1.76 (-14.71, 13.14)                                | -3.22 (-10.19, 4.30)                      |
| Fire Season, (11/06 to 3/07) | All data              | 2                      | 9.73 (-3.41, 24.65)                                   | -7.92 (-20.67, 6.88)                                 | -4.00 (-10.87, 3.41)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-2                    | 8.59 (-5.31, 24.53)                                   | -3.11 (-15.98, 11.73)                                | -4.94 (-12.05, 2.74)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-3                    | 10.14 (-4.06, 26.45)                                  | -5.22 (-18.48, 10.19)                                | -5.75 (-13.18, 2.33)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-4                    | 11.45 (-2.99, 28.05)                                  | -6.32 (-19.95, 9.63)                                 | -5.50 (-13.25, 2.94)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-8                    | 19.99 (3.85, 38.64) **                                | -4.96 (-20.55, 13.70)                                | -6.76 (-15.38, 2.74)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-12                   | 24.13 (5.38, 46.22) #                                 | -2.39 (-19.71, 18.66)                                | -8.59 (-17.86, 1.72) *                    |
| Fire Season, (11/06 to 3/07) | All data              | 0-24                   | 15.24 (-5.23, 40.12)                                  | 0.61 (-20.00, 26.52)                                 | -7.19 (-18.85, 6.15)                      |
| Fire Season, (11/06 to 3/07) | All data              | 0-48                   | 8.07 (-12.49, 33.46)                                  | 16.36 (-11.89, 53.69)                                | -10.65 (-24.78, 6.15)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0                      | 2.42 (-17.64, 27.35)                                  | -6.97 (-25.59, 16.31)                                | -8.26 (-20.33, 5.63)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 1                      | -5.47 (-24.48, 18.31)                                 | 0.86 (-19.49, 26.37)                                 | -2.55 (-14.07, 10.53)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 2                      | -0.34 (-19.79, 23.83)                                 | -17.48 (-36.80, 7.73)                                | 3.84 (-7.75, 16.89)                       |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-2                    | -2.48 (-22.30, 22.39)                                 | -0.61 (-20.71, 24.59)                                | -5.52 (-17.72, 8.49)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-3                    | -1.90 (-22.29, 23.84)                                 | -5.40 (-26.06, 21.03)                                | -2.44 (-15.07, 12.06)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-4                    | 0.12 (-20.92, 26.76)                                  | -11.93 (-32.61, 15.11)                               | -2.75 (-16.11, 12.74)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-8                    | 9.56 (-14.56, 40.49)                                  | -19.45 (-41.57, 11.03)                               | -1.45 (-17.12, 17.18)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-12                   | 11.97 (-15.50, 48.36)                                 | -13.57 (-38.83, 22.13)                               | -0.15 (-17.50, 20.85)                     |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-24                   | 14.78 (-18.25, 61.16)                                 | 8.49 (-27.22, 61.73)                                 | 3.84 (-18.35, 32.06)                      |
| Fire Season, (11/06 to 3/07) | 35-64 years           | 0-48                   | 21.21 (-15.26, 73.38)                                 | 33.18 (-20.37, 122.75)                               | -20.40 (-42.21, 9.65)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0                      | 48.93 (2.40, 116.59) **                               | -9.68 (-34.69, 24.89)                                | -9.79 (-25.56, 9.31)                      |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 1                      | 53.66 (6.83, 121.00) **                               | -12.94 (-37.92, 22.08)                               | -16.12 (-31.94, 3.38) *                   |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 2                      | 41.04 (1.73, 95.55) **                                | -6.74 (-32.52, 28.89)                                | -7.20 (-23.28, 12.24)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-2                    | 57.00 (8.31, 127.60) **                               | -11.60 (-36.94, 23.91)                               | -15.01 (-31.25, 5.06)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-3                    | 56.02 (7.99, 125.40) **                               | -11.67 (-37.69, 25.21)                               | -14.61 (-31.60, 6.60)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-4                    | 56.25 (8.35, 125.31) **                               | -6.83 (-34.22, 31.97)                                | -16.68 (-34.08, 5.32)                     |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-8                    | 45.50 (0.67, 110.30) **                               | 8.89 (-24.41, 56.87)                                 | -18.72 (-37.41, 5.53)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-12                   | 20.95 (-18.06, 78.54)                                 | 20.35 (-18.99, 78.79)                                | -18.37 (-38.01, 7.49)                     |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-24                   | -8.72 (-43.23, 46.77)                                 | 20.07 (-29.49, 104.47)                               | -10.64 (-34.95, 22.76)                    |
| Fire Season, (11/06 to 3/07) | 65-74 years           | 0-48                   | -25.85 (-56.97, 27.78)                                | 4.04 (-46.12, 100.90)                                | -14.22 (-42.02, 26.92)                    |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0                      | 8.54 (-11.40, 32.96)                                  | -4.03 (-22.56, 18.94)                                | -1.29 (-10.91, 9.36)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 1                      | 8.48 (-11.04, 32.28)                                  | -0.53 (-20.07, 23.78)                                | 1.04 (-9.13, 12.34)                       |
| Fire Season, (11/06 to 3/07) | 75+ years             | 2                      | 11.23 (-7.61, 33.90)                                  | -1.98 (-21.52, 22.41)                                | -8.14 (-18.09, 3.01)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-2                    | 9.31 (-10.76, 33.91)                                  | -3.00 (-22.31, 21.11)                                | -0.96 (-10.99, 10.19)                     |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-3                    | 11.51 (-8.95, 36.56)                                  | -3.64 (-23.55, 21.45)                                | -4.33 (-14.93, 7.59)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-4                    | 11.84 (-8.62, 36.88)                                  | -2.91 (-23.64, 23.45)                                | -2.93 (-13.92, 9.46)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-8                    | 23.38 (0.45, 51.54) **                                | -3.00 (-26.29, 27.64)                                | -5.96 (-17.68, 7.44)                      |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-12                   | 38.15 (9.01, 75.08) #                                 | -7.72 (-31.64, 24.56)                                | -10.31 (-22.66, 4.02)                     |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-24                   | 30.28 (-1.44, 72.22) *                                | -14.10 (-38.75, 20.47)                               | -13.04 (-28.21, 5.33)                     |
| Fire Season, (11/06 to 3/07) | 75+ years             | 0-48                   | 13.91 (-15.60, 53.74)                                 | 9.18 (-25.89, 60.84)                                 | -4.86 (-25.42, 21.36)                     |
| Fire Season, (11/06 to 3/07) | Male                  | 0                      | 5.44 (-11.20, 25.20)                                  | -6.04 (-21.00, 11.75)                                | -8.24 (-16.36, 0.67) *                    |
| Fire Season, (11/06 to 3/07) | Male                  | 1                      | 2.65 (-13.53, 21.85)                                  | 1.36 (-14.97, 20.83)                                 | -5.58 (-13.92, 3.57)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 2                      | 5.98 (-9.81, 24.54)                                   | -1.98 (-18.60, 18.03)                                | -4.33 (-12.71, 4.86)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-2                    | 4.67 (-12.14, 24.70)                                  | -1.20 (-17.26, 17.98)                                | -8.13 (-16.58, 1.16) *                    |
| Fire Season, (11/06 to 3/07) | Male                  | 0-3                    | 6.10 (-11.04, 26.55)                                  | -1.15 (-18.07, 19.27)                                | -7.86 (-16.77, 2.01)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-4                    | 7.90 (-9.57, 28.74)                                   | -1.80 (-19.22, 19.36)                                | -7.97 (-17.33, 2.46)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-8                    | 11.25 (-7.23, 33.40)                                  | 6.28 (-14.68, 32.40)                                 | -8.19 (-18.85, 3.87)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-12                   | 12.40 (-8.54, 38.14)                                  | 10.59 (-12.94, 40.47)                                | -8.28 (-19.88, 5.00)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-24                   | 5.92 (-17.20, 35.48)                                  | 13.58 (-14.28, 50.48)                                | -8.02 (-22.24, 8.81)                      |
| Fire Season, (11/06 to 3/07) | Male                  | 0-48                   | 4.80 (-19.52, 36.46)                                  | 29.35 (-8.95, 83.76)                                 | -10.87 (-28.27, 10.74)                    |
| Fire Season, (11/06 to 3/07) | Female                | 0                      | 17.80 (-5.76, 47.26)                                  | -5.44 (-25.01, 19.24)                                | 2.09 (-10.93, 17.01)                      |
| Fire Season, (11/06 to 3/07) | Female                | 1                      | 15.51 (-6.94, 43.38)                                  | -7.77 (-27.58, 17.46)                                | 1.35 (-10.98, 15.38)                      |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | Female                | 2                      | 17.58 (-4.69, 45.05)                                  | -17.59 (-36.21, 6.46)                                | -3.82 (-15.38, 9.32)                      |
| Fire Season, (11/06 to 3/07) | Female                | 0-2                    | 17.34 (-5.89, 46.31)                                  | -7.10 (-27.07, 18.34)                                | 1.65 (-11.24, 16.41)                      |
| Fire Season, (11/06 to 3/07) | Female                | 0-3                    | 19.04 (-4.78, 48.84)                                  | -12.49 (-32.32, 13.15)                               | -1.91 (-14.87, 13.01)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-4                    | 19.41 (-4.73, 49.67)                                  | -14.68 (-34.90, 11.82)                               | -1.47 (-14.64, 13.73)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-8                    | 38.78 (8.98, 76.73) *                                 | -23.79 (-44.52, 4.69) *                              | -5.40 (-19.29, 10.89)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-12                   | 48.98 (13.40, 95.72) *                                | -23.62 (-45.82, 7.68)                                | -10.04 (-24.53, 7.22)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-24                   | 33.70 (-3.19, 84.64) *                                | -21.62 (-47.39, 16.77)                               | -6.94 (-25.63, 16.45)                     |
| Fire Season, (11/06 to 3/07) | Female                | 0-48                   | 14.13 (-19.77, 62.34)                                 | -6.89 (-41.27, 47.61)                                | -12.78 (-34.40, 15.96)                    |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0                      | -8.58 (-30.27, 19.85)                                 | -6.40 (-28.66, 22.79)                                | -8.18 (-21.91, 7.97)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 1                      | -15.19 (-36.20, 12.72)                                | 4.08 (-20.80, 36.78)                                 | -3.32 (-16.75, 12.28)                     |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 2                      | -6.80 (-28.45, 21.39)                                 | -12.05 (-35.53, 19.97)                               | 5.23 (-8.72, 21.32)                       |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-2                    | -13.46 (-35.09, 15.39)                                | 1.08 (-23.22, 33.05)                                 | -6.48 (-20.68, 10.26)                     |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-3                    | -12.49 (-34.80, 17.45)                                | -2.17 (-27.36, 31.76)                                | -2.33 (-17.31, 15.35)                     |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-4                    | -10.15 (-33.12, 20.70)                                | -7.73 (-32.86, 26.79)                                | -2.04 (-17.92, 16.91)                     |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-8                    | -4.32 (-29.84, 30.48)                                 | -6.74 (-36.05, 36.01)                                | 3.70 (-15.97, 27.99)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-12                   | -4.94 (-32.97, 34.82)                                 | 0.95 (-32.68, 51.39)                                 | 7.67 (-14.28, 35.24)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-24                   | 5.91 (-29.85, 59.88)                                  | 25.03 (-20.88, 97.59)                                | 8.55 (-18.18, 44.02)                      |
| Fire Season, (11/06 to 3/07) | Males, 35-64 years    | 0-48                   | 19.90 (-21.84, 83.92)                                 | 44.74 (-20.76, 164.38)                               | -21.57 (-46.23, 14.41)                    |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0                      | 23.61 (-23.72, 100.32)                                | -22.58 (-50.22, 20.40)                               | -10.48 (-28.23, 11.66)                    |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 1                      | 23.15 (-22.37, 95.35)                                 | -21.00 (-49.12, 22.67)                               | -16.73 (-34.34, 5.61)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 2                      | 24.20 (-18.25, 88.67)                                 | -6.56 (-39.24, 43.71)                                | -4.93 (-22.69, 16.91)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-2                    | 30.34 (-18.84, 109.32)                                | -23.78 (-51.52, 19.84)                               | -16.64 (-34.85, 6.66)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-3                    | 31.04 (-18.32, 110.23)                                | -20.45 (-50.34, 27.43)                               | -13.89 (-32.92, 10.53)                    |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-4                    | 34.03 (-16.02, 113.89)                                | -11.82 (-44.78, 40.81)                               | -15.83 (-35.48, 9.80)                     |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-8                    | 21.74 (-22.75, 91.84)                                 | 17.24 (-25.64, 84.86)                                | -15.60 (-37.04, 13.14)                    |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-12                   | 0.89 (-37.75, 63.51)                                  | 39.23 (-13.57, 124.30)                               | -11.92 (-35.52, 20.33)                    |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-24                   | -26.53 (-59.31, 32.65)                                | 51.53 (-19.38, 184.83)                               | -10.10 (-37.88, 30.11)                    |
| Fire Season, (11/06 to 3/07) | Males, 65-74 years    | 0-48                   | -33.40 (-66.04, 30.62)                                | 30.44 (-40.14, 184.22)                               | -10.95 (-43.55, 40.47)                    |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0                      | 18.79 (-8.60, 54.39)                                  | 0.10 (-23.04, 30.21)                                 | -6.29 (-17.89, 6.96)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 1                      | 17.42 (-9.15, 51.75)                                  | 8.21 (-17.36, 41.68)                                 | -1.56 (-14.27, 13.02)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 2                      | 14.58 (-9.92, 45.74)                                  | 9.35 (-17.47, 44.89)                                 | -11.25 (-24.14, 3.82)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-2                    | 19.01 (-8.56, 54.89)                                  | 5.49 (-19.50, 38.22)                                 | -4.91 (-17.11, 9.08)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-3                    | 20.01 (-7.60, 55.88)                                  | 7.20 (-19.19, 42.21)                                 | -7.93 (-21.04, 7.36)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-4                    | 20.04 (-7.48, 55.76)                                  | 7.50 (-19.98, 44.40)                                 | -7.31 (-21.13, 8.93)                      |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-8                    | 23.26 (-5.08, 60.07)                                  | 10.14 (-21.74, 55.02)                                | -11.22 (-26.08, 6.64)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-12                   | 36.25 (0.69, 84.37) **                                | 1.23 (-31.27, 49.09)                                 | -16.45 (-31.99, 2.64) *                   |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-24                   | 28.28 (-10.74, 84.35)                                 | -12.78 (-44.34, 36.67)                               | -19.35 (-37.92, 4.77)                     |
| Fire Season, (11/06 to 3/07) | Males, 75+ years      | 0-48                   | 12.87 (-23.64, 66.82)                                 | 18.85 (-29.63, 100.75)                               | -2.17 (-29.81, 36.34)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0                      | 34.13 (-9.12, 97.95)                                  | -7.50 (-37.67, 37.28)                                | -8.49 (-31.35, 21.98)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 1                      | 19.76 (-17.25, 73.33)                                 | -5.96 (-37.56, 41.65)                                | -1.23 (-22.08, 25.21)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 2                      | 19.62 (-19.00, 76.65)                                 | -28.76 (-58.56, 22.47)                               | 0.89 (-18.96, 25.60)                      |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-2                    | 26.52 (-13.70, 85.48)                                 | -3.61 (-35.50, 44.04)                                | -3.29 (-25.22, 25.07)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-3                    | 26.37 (-14.80, 87.43)                                 | -11.06 (-43.18, 39.22)                               | -2.75 (-24.53, 25.33)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-4                    | 28.75 (-14.28, 93.39)                                 | -20.35 (-52.26, 32.91)                               | -4.64 (-27.47, 25.37)                     |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-8                    | 49.45 (-3.37, 131.14) *                               | -43.04 (-70.00, 8.15) *                              | -12.16 (-35.74, 20.06)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-12                   | 62.20 (-1.23, 166.38) *                               | -41.41 (-70.70, 17.16)                               | -18.33 (-42.97, 16.97)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-24                   | 41.85 (-22.89, 160.94)                                | -31.53 (-70.09, 56.75)                               | -11.26 (-44.16, 41.01)                    |
| Fire Season, (11/06 to 3/07) | Females, 35-64 years  | 0-48                   | 31.66 (-32.58, 157.10)                                | 1.44 (-62.40, 173.66)                                | -21.51 (-57.39, 44.59)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0                      | 97.64 (3.97, 275.70) **                               | 10.33 (-30.75, 75.77)                                | -5.32 (-36.57, 41.34)                     |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 1                      | 131.99 (14.80, 368.78) **                             | 2.73 (-37.00, 67.51)                                 | -12.70 (-44.47, 37.25)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 2                      | 77.22 (-1.49, 218.84) *                               | -6.29 (-42.57, 52.90)                                | -14.64 (-45.20, 32.94)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-2                    | 115.15 (9.91, 321.17) **                              | 8.09 (-32.68, 73.54)                                 | -7.53 (-40.22, 43.05)                     |

| <b>Period<sup>a</sup></b>    | <b>Stratification</b> | <b>Lag<br/>(hours)</b> | <b>PM<sub>2.5</sub><br/>% difference<br/>(95% CI)</b> | <b>PM<sub>10</sub><br/>% difference<br/>(95% CI)</b> | <b>CO %<br/>% difference<br/>(95% CI)</b> |
|------------------------------|-----------------------|------------------------|---|--|---|
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-3                    | 109.94 (7.45, 310.18) **                              | 1.31 (-37.89, 65.24)                                 | -15.21 (-47.64, 37.32)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-4                    | 104.34 (5.71, 295.00) **                              | 0.59 (-39.31, 66.73)                                 | -17.40 (-49.72, 35.68)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-8                    | 105.37 (6.22, 297.05) **                              | -2.94 (-48.09, 81.48)                                | -25.54 (-57.74, 31.20)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-12                   | 70.79 (-11.61, 229.99)                                | -12.13 (-58.54, 86.26)                               | -33.47 (-62.98, 19.55)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-24                   | 40.85 (-35.47, 207.43)                                | -33.92 (-76.44, 85.29)                               | -10.00 (-52.07, 68.98)                    |
| Fire Season, (11/06 to 3/07) | Females, 65-74 years  | 0-48                   | 0.49 (-60.53, 155.82)                                 | -39.91 (-82.69, 108.55)                              | -19.84 (-63.09, 74.11)                    |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0                      | -4.70 (-31.30, 32.21)                                 | -11.60 (-38.65, 27.38)                               | 8.63 (-8.56, 29.05)                       |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 1                      | -3.52 (-29.71, 32.43)                                 | -14.33 (-40.82, 24.01)                               | 5.13 (-10.99, 24.17)                      |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 2                      | 6.18 (-20.75, 42.27)                                  | -16.91 (-42.03, 19.09)                               | -4.20 (-19.01, 13.31)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-2                    | -2.82 (-29.57, 34.08)                                 | -17.33 (-43.48, 20.92)                               | 6.07 (-10.91, 26.29)                      |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-3                    | 0.28 (-27.40, 38.52)                                  | -20.53 (-46.29, 17.59)                               | 1.31 (-15.74, 21.80)                      |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-4                    | 0.72 (-27.01, 38.99)                                  | -18.76 (-45.69, 21.52)                               | 3.07 (-13.93, 23.43)                      |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-8                    | 23.47 (-11.63, 72.51)                                 | -21.86 (-50.43, 23.19)                               | 0.58 (-17.23, 22.22)                      |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-12                   | 40.89 (-3.89, 106.53) *                               | -19.39 (-49.85, 29.55)                               | -2.91 (-21.69, 20.37)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-24                   | 32.00 (-14.95, 104.88)                                | -16.07 (-49.88, 40.53)                               | -5.33 (-28.72, 25.74)                     |
| Fire Season, (11/06 to 3/07) | Females, 75+ years    | 0-48                   | 14.35 (-28.57, 83.07)                                 | -2.36 (-45.28, 74.22)                                | -8.13 (-35.83, 31.51)                     |

IQRs: PM<sub>2.5</sub> = 6.1 µg/m<sup>3</sup>; PM<sub>10</sub> = 13.7 µg/m<sup>3</sup>; CO = 0.3 ppm

<sup>a</sup>All data: July 2006–June 2007; Fire season: November 2006–March 2007

\*p < 0.1; \*\*p < 0.05; #p < 0.01.